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ABSTRACT

The Alaska School Effectiveness Project produced several reports in a series of reviews of research literature on such topics as class size. Using an ERIC search and conventional library methods, the question raised was "Do small classes have a positive effect on the academic achievement of elementary and secondary students?" Of the 35 documents reviewed, 20 were deemed valid studies. While findings were contradictory, reducing or increasing class size generally does not automatically produce any particular, foreseeable effect on achievement. In view of the findings, it is recommended that: (1) attention should be devoted to improving instructional methods, rather than altering class size in general; (2) since operating smaller class sizes for academically needy and younger students appears beneficial, schools are advised to make such settings possible if resources allow; (3) the possibility of small instructional groupings within large classes (using aides, for example) be explored, especially for academically needy children; and (4) no additional research on class size be initiated, although educators are urged to lend support to research which examines the relationship between opinions, attitudes and preferences, and outcomes. The document includes item decision displays, a 34 citation bibliography, and individual item reports on the citations. (BRR)

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ED214705

Topic Summary Report

CLASS SIZE

Research on School Effectiveness Project

Prepared for:

Alaska Department of Education
Office of Planning and Research

December 12, 1980

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RC 013240

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PREFACE

This report is one of several in a series of reviews of research literature conducted for the Alaska School Effectiveness Project. Each of the reports addresses a topic which is deemed to have an impact, actual or potential, on school effectiveness. All of the reports have been generated using the same general approach and a common reporting format.

The review process begins with a topical literature search using both computer based ERIC and conventional library methods. Articles and other documents found are analyzed and abstracted into a brief form called an Item Report. Each of the items is then judged against a set of pre-established criteria and ranked on a five-point scale. The collection of Item Reports are then examined for purposes of identifying issues. These issues are stated in the form of hypotheses. Each hypothesis thus generated becomes the subject of a Decision Display. A Decision Display is created by sorting the Item Reports into those which support or negate the hypothesis, are inconclusive, are badly flawed, or are irrelevant. One or more Decision Displays are generated for each topic addressed. A Summary Report is then generated from the consideration of the Decision Displays and the file of Item Reports. Thus, each complete report in the series consists of a Summary Report which is backed up by one or more Decision Displays which in turn are supported by a file of Item Reports. This format was designed to accommodate those readers who might wish to delve into various depths of detail.

This report is not intended to represent the "final word" on the topic considered. Rather, it represents the analysis of a particular collection of research documents at this time. There may be other documents that were not found because of time or other limitations. There may be new research published tomorrow. This present report represents our best judgment of available information at this time. This format allows for modification and re-analysis as new information becomes available or old information is re-interpreted.

For a more complete description of the analysis process see William G. Savard, Procedures for Research on School Effectiveness Project, Northwest Regional Educational Laboratory, December 10, 1980.

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Topic: Class Size
Authors: K. Cotton/W. G. Savard
Date: December 12, 1980

Overview

The relationship between class size and educational outcomes is a controversial and much-investigated subject. Many educators, parents, students and others argue that small classes result in higher achievement and better teacher and student morale than do large classes. This contingent contends further that these superior outcomes justify the higher costs associated with operating small classes.

These views are countered by the arguments of other groups both within and outside the educational community. Some claim that smaller classes do not necessarily promote better learning and learning environments. Others argue that, even if smaller classes are best for maximally effective schooling, they are simply too expensive.

In both of these sizeable camps are people who speak from personal preference, others who argue from experience in educational settings, and still others who cite research findings in support of their point of view.

There is no doubt that operating small classes is more expensive than operating large classes. Before considering cost factors, however, it is important to ask what is known about the relative merits of small and large classes as regards their effects on achievement and other educational outcomes.

Considerable research effort has been devoted to studying the relationship between class size and: 1) academic achievement in various subjects and at various levels; 2) student behavior/attitudes; 3) teacher morale/satisfaction; 4) instructional methods; 5) classroom management and other variables. While

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many well-designed and carefully conducted studies have been published, an individual seeking to extract meaningful conclusions from the class size research confronts several problems. "Small classes" and "large classes" are not defined in a consistent way from study to study, (for example, "small" classes may range from three to twenty) which makes difficult the task of examining the studies in relation to one another. Some studies draw conclusions about the relationship between class size and achievement, for example, without examining the influence of other important variables on the outcomes noted. Some researchers draw conclusions about the effects of class size generally, even though data are drawn from only one grade level. These limitations notwithstanding, some patterns do emerge from the research on class size, and these are presented in the next sections of this paper.

Thirty-five documents on class size were examined. Fifteen of these were excluded, either because they were judged invalid or were not reports of research at all. Of the 20 valid studies which remained, 15 were primary sources and five were secondary sources. Ten were concerned with the relationship between class size and academic achievement in one or more areas, five examined class size in relation to one or more aspects of educational environment, and five looked at the effects of class size on both achievement and environment. Seven of the studies/reviews involved elementary students, two involved secondary students, six were concerned with both levels, and five did not specify the age/grade range studied.

Findings

The studies reviewed suggested three hypotheses:

1. Small classes have a positive effect on the academic achievement of elementary and secondary students.

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2. Small classes have a positive effect on student attitudes and behavior, teacher morale, classroom processes and other indicators of the quality of the classroom environment.
3. There is no optimal class size for all instructional situations. Appropriate class size is dependent on student age/grade, student aptitude, subject taught and instructional methods used.

Each of these hypotheses has considerable support, but the third hypothesis--that there is no optimal class size in isolation of other factors--is supported by both the largest number of studies and the largest number of high-quality studies. What this means is that the research to date tells us that reducing class size (or, for that matter, increasing it) will not automatically produce any particular, forseeable result. Other factors, such as the instructional methods used in a class of a given size, are as important or more important than the class size per se.

However, although a certain class size cannot be expected to lead to any particular outcome in general, the research does suggest that small classes can be beneficial in certain situations. There are indications, for example, that the achievement of disadvantaged, low-ability, special education or primary age students is enhanced by smaller classes. Very small classes, those with five or fewer students, appear to produce considerably higher achievement than average size classes, although the evidence for this has emerged chiefly from studies of short-term instructional situations. Some studies found both that smaller classes are beneficial and that large classes--especially very large classes--are detrimental.

The evidence is stronger concerning the relationship of class size to various indicators of the quality of the educational environment. Nine of the documents reviewed found better student behavior, higher teacher morale and

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more effective instructional practices in conjunction with small classes. Moreover, the non-research writings examined indicated that students and parents generally preferred smaller classes and that teachers overwhelmingly preferred them.

Conclusions

Reducing or increasing class size will not automatically produce any particular, foreseeable effect on achievement. Increasing class size is inadvisable, especially with regard to issues of student behavior and classroom management. Students, especially academically needy and younger students, can benefit from smaller classes if the instructional approach is designed to take advantage of the smaller class size. Teachers, students and parents prefer smaller classes. Smaller class size has the potential for stimulating the development and use of improved instructional methods, but will not automatically do so.

Recommendations

1. It would be inadvisable to reduce or increase class size generally in hopes of producing any particular educational outcome. Some kinds of instructional methods appear to work best with--or are only possible in--smaller classes. Following the recommendations of several of the researchers, we would recommend devoting attention to improving instructional methods, rather than altering class size in general.
2. However, operating smaller classes for academically needy and younger students appears beneficial, and schools are advised to make possible smaller instructional settings for such children if resources can be made available to do so.

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3. Additionally, since small instructional groupings are possible within large classes, it is recommended that schools consider ways to make small group instruction available, especially to academically needy children, for some portion of the school day. Use of aides as small group instructors, for example, could occur simultaneously with larger group activity conducted by the classroom leader.

4. It is not recommended that additional research on class size be initiated--at least not the kinds of research conducted to date--as it is likely to produce more of the same contradictory findings noted in this paper. It may be worth considering, however, for educators to lend support to research which examines the relationship between opinions, attitudes and preferences, on the one hand, and outcomes. It may be that the shared preference for small classes among teachers, students and parents can bring about higher quality learning and learning environments when small classes are made available.

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CLASS SIZE
Decision Display
#1

Restatement of issue as a hypothesis:

Small classes have a positive effect on the academic achievement of elementary and secondary students.

Item Number	Short Title	Quality Rating of Study [ ]	
Items which tend to support hypothesis:			
71	ERS, 1978, Class Size Review	[4]	("more" of the 41 studies supported small classes than supported large classes)
112	Glass & Smith, 1978, Class Size/ Achievement Meta-Analysis	[4]	("most" of 77 studies support)
91	Furno & Collins, 1967, Class Size & Learning Learning	[3]	
99	Jeffs & Cram, 1968, Class Size/Business & Government	[3]	(students in a small class had higher achievement than those in a large class)
100	Moody, et al., 1972, Class Size/Math	[3]	
93	Woodson, 1968, Class Size & Achievement	[3]	
Items which tend to deny hypothesis:			
71	ERS, 1978, Class Size Review	[4]	("some" of the 41 studies did not support small classes
112	Glass & Smith, 1978, Class Size/	[4]	("a few" of 77 studies deny)
101	DeAngelis, 1977, Class Size/Lab	[3]	
99	Jeffs & Cram, 1968, Class Size/Business & Government	[3]	(no differences among two small and two large classes
83	Counelis, 1970, Class Size/SEED Project	[2]	
94	Johnson & Scriven, 1967, Jr. High Class Size	[2]	
90	Thompson, 1978, Review of 60 Class Size Studies	[2]	

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Items which are inconclusive regarding the hypothesis:

74	Balow, 1967, Class Size/Reading	[4]
114	ERS, 1980, Class Size Research Critique	[4]
102	Gajewsky, 1973, Class Size Review/ Bibliography	[4]
92	Wright, et al., 1977, Class Size in Jr. Grades	[3]
96	Shapson, 1972, Class Size Literature Review	[2]

Items which were excluded because they were weak:

73	EPC, 1959, Class Size Implications
75	Coleman, 1971, Class Size/Pupil-Teacher Ratio
88	Shapiro, 1975, Class Size/Preschool
97	Sitkei, 1968, L.A. Class Size Review
98	Madison Class Size Study, 1976

Items which were excluded because they were judged to be irrelevant to this hypothesis:

78	Smith & McClusky, 1976, Class Size/Educational Quality
79	Carter, 1977, Effective Teaching of Writing
80	Haberman & Larson, 1968, Reducing Class Size
81	Bozzomo, 1978, Class Size Imput
82	Harap, 1959, Teacher Morale
84	Four Teachers, 1976, Class Size
85	Federal Reserve Bank, 1975, Schools Make a Difference
86	Pritchard, 1973, Class Size Article
87	McKenna & Olson, 1975, Class Size Revisited
95	Stennett, 1973, Class Size Speech

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CLASS SIZE
Decision Display
#2

Restatement of issue as a hypothesis:

Small classes have a positive effect on student attitudes and behavior, teacher morale, classroom processes and other indicators of the quality of the classroom environment.

Item Number	Short Title	Quality Rating of Study [ ]	
Items which tend to support hypothesis:			
71	ERS, 1978, Class Size Review	[4]	
113	Smith & Glass, 1979, 2nd Class Size Meta-Analysis	[4]	
89	Filby, et al., 1980, Class Size Field Study	[3]	
99	Jeffs & Cram, 1968, Class Size/Business & Government	[3]	
72	Olson, 1971, Classroom Observation Study	[2]	
96	Shapson, 1972, Class Size Literature Review	[2]	
77	Templeton, 1972, Class Size/Management Review Scores	[2]	(6 of 14 studies support)
90	Thompson, 1978, Review of 60 Class Size Studies	[2]	
76	Vincent, 1968, Class Size/IQ	[2]	
Items which tend to deny hypothesis:			
77	Templeton, 1972, Class Size/Management Review Scores	[2]	(4 of 14 studies deny)
Items which are inconclusive regarding the hypothesis:			
114	ERS, 1980, Class Size Research Critique	[4]	
77	Templeton, 1972, Class Size/Management Review Scores	[2]	(4 of 14 studies inconclusive)

Items which were excluded because they were weak:

73 EPC, 1959, Class Size Implications
75 Coleman, 1971, Class Size/Pupil-Teacher Ratio
88 Shapiro, 1975, Class Size/Preschool
97 Sitkei, 1968, L.A. Class Size Review
98 Madison Class Size Study, 1976

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Items which were excluded because they were judged to be irrelevant to this hypothesis:

78	Smith & McClusky, 1976, Class Size/Educational Quality
79	Carter, 1977, Effective Teaching of Writing
80	Haberman & Larson, 1968, Reducing Class Size
81	Bozzomo, 1978, Class Size Imput
82	Harap, 1959, Teacher Morale
84	Four Teachers, 1976, Class Size
85	Federal Reserve Bank, 1975, Schools Make a Difference
86	Pritchard, 1973, Class Size Article
87	McKenna & Olson, 1975, Class Size Revisited
95	Stennett, 1973, Class Size Speech

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CLASS SIZE
Decision Display
#3

Restatement of issue as a hypothesis:

There is no optimal class size for all instructional situations. Appropriate class size is dependent on student age/grade, student aptitude, subject taught and instructional methods used.

Item Number	Short Title	Quality Rating of Study [ ]
Items which tend to support hypothesis:		
74	Balow, 1967, Class Size/Reading	[4]
71	ERS, 1978, Class Size Review	[4]
114	ERS, 1980, Class Size Research Critique	[4]
102	Gajewsky, 1973, Class Size Review/ Bibliography	[4]
101	DeAngelis, 1977, Class Size/Lab	[3]
99	Jeffs & Cram, 1968, Class Size/Business & Government	[3]
100	Moody, et al., 1972, Class Size/Math	[3]
92	Wright, et al., 1977, Class Size in Jr. Grades.	[3]
83	Counelis, 1970, Class Size/SEED Project	[2]
94	Johnson & Scriver, 1967, Jr. High Class Size	[2]
72	Olson, 1971, Classroom Observation Study	[2]
96	Shapson, 1972, Class Size Literature Review	[2]
77	Templeton, 1972, Class Size/Management Review Scores	[2]
90	Thompson, 1978, Review of 60 Class Size Studies	[2]
Items which tend to deny hypothesis:		
112	Glass & Smith, 1978, Class Size/Achievement	[4]
113	Smith & Glass, 1979, 2nd Class Size Meta-Analysis	[4]
89	Filby, et al., 1980, Class Size Field Study	[3]
91	Furno & Collins, 1967, Class Size & Learning	[3]
93	Woodson, 1958, class Size & Achievement	[3]
76	Vincent, 1968, Class Size/IOQ	[2]
Items which are inconclusive regarding the hypothesis:		
	None	

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Items which were excluded because they were judged to be irrelevant to this hypothesis:

78 Smith & McClusky, 1976, Class Size/Educational Quality
79 Carter, 1977, Effective Teaching of Writing
80 Haberman & Larson, 1968, Reducing Class Size
81 Bozzomo, 1978, Class Size Imput
82 Harap, 1959, Teacher Morale
84 Four Teachers, 1976, Class Size
85 Federal Reserve Bank, 1975, Schools Make a Difference
86 Pritchard, 1973, Class Size Article
87 McKenna & Olson, 1975, Class Size Revisited
95 Stennett, 1973, Class Size Speech

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SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 71 LOCATION: NWREL Info. Ctr Pamphlet File

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Educational Research Service. Class size: A summary of research. Arlington, Va: Educational Research Service, 1978.

DESCRIPTORS: Class Size

SHORT TITLE: ERS, 1978, Class Size Review

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is an extensive review of the literature. The authors make sound conclusions from the studies.

SYNOPSIS:

This publication reviews 149 studies on class size.

ITEM NUMBER: 71 SHORT TITLE: ERS, 1978
Class Size Summary

RESEARCHER'S FINDINGS:

Forty-one studies on the effects of class size on pupil achievement are described. More studies showed improved achievement following smaller classes than found improved achievement following larger classes. Many studies found improved achievement for some grades or subject levels, while for others, no differences were found. Two studies report that high pupil-teacher ratios are correlated with Selective Service mental test failures. Eleven studies found that smaller classes were associated with improved instructional methods. Six studies showed no such association. Five studies found that smaller classes had positive effects on student behaviors or attitudes. Four studies found no such effects. The research reviewed supplies no support for the notion of an "optimal" class size. Teacher and public opinion support smaller classes. Smaller classes cost a lot of money (examples are given).

RESEARCHER'S CONCLUSIONS:

Research findings on the effects of class size on pupil achievement across all grade levels are contradictory and inconclusive. There is no support for an "optimum" class size in isolation of other factors. There is evidence that small classes are important to increased pupil achievement in reading and mathematics in the early primary grades. There is some evidence of a positive relationship between small class size and pupil achievement when primary grade pupils are taught in small classes for two or more consecutive years. There is evidence that pupils with lower academic ability tend to benefit the most from smaller classes. Some research indicates that smaller classes can positively affect the scholastic achievement of economically or socially disadvantaged students. Research indicates the emphasis should be on methods and quality of instruction rather than quantity of students. Few if any pupil benefits come from smaller classes if instructional methods are not changed.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 72 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Olson, M. N. Ways to achieve quality in school classrooms: Some definitive answers. Phi Delta Kappan, 1971, 53, 63-65.

DESCRIPTORS: Instructional Practices, Class Size

SHORT TITLE: Olson, 1971, Classroom Observation Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The teaching behaviors found to be correlated with high scores are the ones which this observational method is biased towards. No attempt is made to test any objective criteria. The study raises interesting questions, some of which could be answered by the raw data (e.g., Are the teaching behaviors which correlate with high scores also correlated with small class size? and what other variables are correlated with the class size and high scores?). The authors needed to test for student achievement, and compute multiple regressions in order to utilize all this data.

SYNOPSIS:

Classroom observations were made in 18,528 elementary and secondary classrooms in 112 largely suburban school districts in metropolitan areas of New York, New Jersey, Connecticut, Boston, Cleveland, St. Louis, Chicago, the Midwest, Denver and the Rocky Mountain area, the Baltimore-Deleware area and Western Washington State. The observers noted instances of individualization, interpersonal regard, group activity and creativity using a structured observation guide called Indicators of Quality. Each such observation received a score of +1. Negative teacher or student behaviors received a score of -1, and total scores were obtained by simple addition.

ITEM NUMBER: 72 SHORT TITLE: Olson, 1971
Classroom Observation Study

RESEARCHER'S FINDINGS:

High scores were associated with small-group work, individual work, dicussion, lab work, pupil reports, demonstrations and small classes (less than 26 in elementary and less than 16 in secondary school). Low scores were associated with lectures, question/answer, seatwork, tests and movies. These instructional practices were by far the most prevalent. Substitute teachers had much lower scores than any other group. Having more adults in the class did not lead to any improvement.

RESEARCHER'S CONCLUSIONS:

A new method of dealing with teacher absences is needed. Schools must reduce the size of classes in conjuntion with improvement of instructional practices.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 73 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Educational Policy Committee. The school day, the school year and work load of teachers: a study of the educational implications. Albany, N. Y.: New York State Teachers Association, 1959. (ERIC/EDRS No. ED 011 470)

DESCRIPTORS: Class Size

SHORT TITLE: EPC, 1959, Class Size Implications

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE _X_ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) [1] 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This review does not reference the studies which produced the findings cited.

SYNOPSIS:

This is a review "many" (but unspecified) studies on class size.

ITEM NUMBER: 73 SHORT TITLE: EPC, 1959
Class Size Implications

RESEARCHER'S FINDINGS:

Eighty percent of class size studies substantiate the values of smaller classes or are inconclusive. Of the studies which have the best research design, five of every six cases favor small classes. No studies control for all or most of the relevant confounding variables. No studies had experimental techniques.

RESEARCHER'S CONCLUSIONS:

The judgment of teachers should be used to determine the ideal class size.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 74 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Balow, I. H. A longitudinal evaluation of reading achievement in small classes. Riverside, CA: University of California, 1967. (ERIC/EDRS No. ED 011 813)

DESCRIPTORS: Class Size

SHORT TITLE: Balow, 1967, Class Size/Reading

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a well-done and well-controlled study. Only the data for analysis which produced significant differences are presented.

SYNOPSIS:

A 50% reduction in reading class size was achieved by staggering starting and finishing times in grades 1-3 in 21 public schools in Riverside, California. The Metropolitan Readiness Tests were administered to all students early in first grade, Metropolitan Achievement Tests early in second and third grade and the Sequential Tests of Educational Progress at the fourth grade level. Initial readiness scores were virtually identical for the 251 experimental and 744 control children.

ITEM NUMBER: 74 SHORT TITLE: Balow, 1967
Class Size/Reading

RESEARCHER'S FINDINGS:

Experimental students scored higher on the second grade achievement scores than control students ($p<.05$). Experimental boys scored much higher on these tests than control boys ($p<.01$) There were no significant differences in scores for girls. The increases in third grade after controlling for entering reading level were not significantly different, but the third grade reading scores were significantly different after controlling for reading readiness or IQ scores ($p<.01$).

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 75 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Coleman, P. Pupil-teacher ratio and the use of research findings in educational policy-making, 1971. (ERIC/EDRS No. ED 058 640)

DESCRIPTORS: Class Size

SHORT TITLE: Coleman, 1971, Class Size/Pupil-Teacher Ratio

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) [1] 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The biases of the author are apparent in this review of two review articles.

SYNOPSIS:

This paper reviews Coleman's (1966) and Byers's (1968) reviews of the class size literature.

ITEM NUMBER: 75 SHORT TITLE: Coleman, 1971
Class Size/Pupil-Teacher Ratio

RESEARCHER'S FINDINGS:

Class size has been universally found to make no difference in school effectiveness.

RESEARCHER'S CONCLUSIONS:

Class size should be increased to save money, despite the objections of teachers.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 76 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Vincent, W. S. Further clarification of the class size question. Institute of Administrative Research-Research Bulletin, 1968, 9, 1-3.

DESCRIPTORS: Class Size

SHORT TITLE: Vincent, 1968, Class Size/IOQ

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

There is no indication of whether the Indicators of Quality have any relation to effective teaching. Also, a correlational study can not justify the types of causitive conclusions reached by the author.

SYNOPSIS:

Observations were made in 2,106 third-sixth grade classrooms and 2,181 tenth-twelfth grade classrooms in 47 school districts of the Metropolitan School Study Council. Observers rated teachers on the Indicators of Quality (IOQ) which computes the total number of "positive" and "negative" behaviors by the teacher and students of a classroom and subtracts one from the other to get a total score. These scores were then correlated with class size.

ITEM NUMBER: 76 SHORT TITLE: Vincent, 1968
Class Size/IOQ

RESEARCHER'S FINDINGS:

IOQ scores were higher for secondary classes with 15 or less students. In elementary classes, IOQ scores were highest for classes with 15 or less students, and lowest for classes with 26 or more students. At both levels, there is another increase in scores at size 36-40 students, based on a small sample. This last difference is not discussed, the others are significant at the .01 level.

RESEARCHER'S CONCLUSIONS:

A replication of this study should be made with at least as large a sample. If the results of this replication are consistent with the findings of this study, the class size question should be considered to be settled.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 77 LOCATION: NWREL Infor. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Templeton, I. Class size. Educational Management Review Scores, Number 8. Eugene, OR: University of Oregon, 1972. (ERIC/EDRS No. ED 066 779)

DESCRIPTORS: Class Size

SHORT TITLE: Templeton, 1972, Class Size/Management Review Scores

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

A review of 14 studies is not sufficient in an area with such a large number of research findings.

SYNOPSIS:

This paper reviews 14 studies on class size.

ITEM NUMBER: 77 SHORT TITLE: Templeton, 1972
Class Size/Management Review Scores

RESEARCHER'S FINDINGS:

Six studies show that smaller classes are beneficial. Four studies show no differences due to class size. All studies report increased costs associated with decreased class size.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 78 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Smith, F. L. Jr., and McClusky, L. The class size/quality of educational process relationship. Update Report III. New York, N.Y.: Metropolitan Study Council, 1976. (ERIC/EDRS No. ED 126 210)

DESCRIPTORS: Class Size

SHORT TITLE: Smith & McClusky, 1976, Class Size/Educational Quality

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 78 SHORT TITLE: Smith, 1976
Class Size/Educational Quality

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 79 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Carter, R. D. Five obstacles to the effective teaching of writing. NASP Bulletin, 1977, 61, 96-100.

DESCRIPTORS: Class Size

SHORT TITLE: Carter, 1977, Effective Teaching of Writing

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 79 SHORT TITLE: Carter, 1977
Effective Teaching of Writing

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 80 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Haberman, M. and Larson, R. G. Would cutting class size change instruction? National Elementary Principal, 1968, 47(4), 18-19.

DESCRIPTORS: Class Size

SHORT TITLE: Haberman & Larson, 1968, Reducing Class Size

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 80 SHORT TITLE: Haberman & Larson, 1968
Reducing Class Size

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 81 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Bozzomo, L. E. Does class size matter? National Elementary Principal, 1978, 57(2), 78-81

DESCRIPTORS: Class Size

SHORT TITLE: Bozzomo, 1978, Class Size Impact

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 81 SHORT TITLE: Bozzomo, 1978
Class Size Impact

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 82 LOCATION: PSU Library

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Harap, H. Many factors affect teacher morale. Nation's Schools, 1959, 63, 55-57.

DESCRIPTORS: Teacher Characteristics, Class Size

SHORT TITLE: Harap, 1959, Teacher Morale

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 82 SHORT TITLE: Harap, H., 1959
Teacher Morale

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 83 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Counelis, J. S. First grade students in the Hunters Point-Bayview project: a diagnostic review. San Francisco: University of San Francisco, 1970. (ERIC/EDRS No. ED 052 905)

DESCRIPTORS: Class Size, Time on Task

SHORT TITLE: Counelis, 1970, Class Size/SEED Project

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a correlational study in a situation where they could easily have made it an experimental study. The treatment provided is not detailed.

SYNOPSIS:

Five hundred and sixty-eight first graders in poor, predominantly Black areas of San Francisco were enrolled in the Southeast Educational Development (SEED). Data were collected on these students for age, sex, attendance, and reading achievement (Stanford Achievement Test) and mathematics achievement. The mathematics scores are not reported. Twenty-three percent of the students had missing data, including 83% at one school.

ITEM NUMBER: 83 SHORT TITLE: Counelis, 1970
Class Size/SEED Project

RESEARCHER'S FINDINGS:

No sex differences were found. Attendance was correlated with reading achievement at .61. Students in the project improved their reading scores at the rate of .91 months per month in the program, but this was significantly better than the scores the year before the program was installed ($p < .01$). Class size was not found to be related to reading achievement scores,

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 84 LOCATION: PSU Library

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Four teachers sound off about class size. Today's Education, 1976, 65, 39-42, 98.

DESCRIPTORS: Class Size

SHORT TITLE: Four Teachers, 1976, Class Size

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 84 SHORT TITLE: Four Teachers, 1976
Class Size

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 85 LOCATION: PSU Library

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Schools do make a difference: The Federal Reserve Bank study. Today's Education, 1975, 64, 24-31.

DESCRIPTORS: School Effectiveness, Class Size

SHORT TITLE: Federal Reserve Bank, 1975, Schools Make a Difference

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 85 SHORT TITLE: Federal Reserve Bank, 1975
Schools Make a Difference

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 86 LOCATION: PSU Library

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Pritchard, R. Does class size make a difference? Scholastic Teacher, April, 1973, 20-24.

DESCRIPTORS: Class Size

SHORT TITLE: Pritchard, 1973, Class Size Article

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 86 SHORT TITLE: Pritchard, 1973
Class Size Article

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 87 LOCATION: PSU Library

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: McKenna, B. and Olson, M. N. Class size revisited. Today's Education, 1975, 64, 29-31.

DESCRIPTORS: Class Size

SHORT TITLE: McKenna & Olson, 1975, Class Size Revisited

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 87 SHORT TITLE: McKenna & Olson, 1975
Class Size Revisited

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 88 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Shapiro, S. Some classroom ABC's: Research takes a closer look. Elementary School Journal, 1975, 75, 436-441.

DESCRIPTORS: Class Size

SHORT TITLE: Shapiro, 1975, Class Size/Preschool

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) [1] 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

No raw data is presented. No details are given concerning methodology. For these reasons the numbers which are given are uninterpretable.

SYNOPSIS:

Observations were made to 274 four-year olds in 17 classrooms in half-day nursery schools. No further details are presented.

ITEM NUMBER: 68 SHORT TITLE: Shapiro, 1975
Class Size/Preschool

RESEARCHER'S FINDINGS:

Teacher-pupil contacts increased as the child-teacher ratio declined from 11:1 to 8:1. Contacts decreased again when the ratio went below 8:1. Non-involved behavior was highest in medium classrooms where the space was between 30 and 50 square feet per student. Crowded classrooms had the greatest amount of deviant and onlooking behavior. Large classrooms had the most random behavior. No details of the data are presented.

RESEARCHER'S CONCLUSIONS:

Contacts went down as the child-teacher ratio declined, because the complexity of student behaviors decreased as the number of students in the class went below 16.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 89 LOCATION: NWREL Info. Cntr. Pamphlet File

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Filby, N., Cahen, L., McCutcheon, G. and Kyle, D. What happens in smaller classes? A summary report of a field study. San Francisco: Far West Laboratory for Educational Research and Development, 1980.

DESCRIPTORS: Class Size

SHORT TITLE: Filby, et al., 1980, Class Size Field Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This study controls for the quality of the teacher. It fails to provide any training to the teachers which would enable them to utilize the class size reductions in their teaching techniques. This proves to be a weakness which prevents the authors from drawing any useful conclusions from the study. There was also no attempt made to control for possible order effects.

SYNOPSIS:

Two second grade teachers in rural Virginia school had the size of their class reduced from 20 to 13 in the second week in January. Two second grade teachers in an inner-city school in California had the size of their class reduced from 35 to 22 at the end of January. The Virginia school had 65% Blacks and 35% Caucasians and slightly over half received free lunches. The California school had 99% Blacks and almost all received free or subsidized lunches. An attempt was made to keep the student achievement level constant following the reduction in class size. A case study approach was used, rather than focusing on standardized testing.

ITEM NUMBER: 89 SHORT TITLE: Filby, et al., 1980
Class Size Field Study

RESEARCHER'S FINDINGS:

In the smaller classes, teachers spent more time with individual students and felt they knew more about how each student was performing. Also, classroom management seemed easier and more effective. There were instances of teachers providing more depth in their lessons in the smaller classes, but no major changes in instructional techniques were made. No achievement results are reported.

RESEARCHER'S CONCLUSIONS:

It is necessary to train teachers to utilize the advantages of smaller classes. Otherwise, a simple reduction in class size may not cause enough changes in instructional methods to significantly effect achivement.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 90 LOCATION: NWREL Info. Cntr. Pamphlet File

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Thompson, S. Class size. Burlingame, California: Association of California Administrators, 1978.

DESCRIPTORS: Class Size

SHORT TITLE: Thompson, 1978, Review of 60 Class Size Studies

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The author does not present balanced discussions of all issues relating to the literature.

SYNOPSIS:

This pamphlet reviews about 60 studies on class size.

ITEM NUMBER: 90 SHORT TITLE: Thompson, 1978
Review of 60 Class Size Studies

RESEARCHER'S FINDINGS:

The use of different measures of class size (e.g., teacher load, or pupil-staff ratio) cause problems with analyzing groups of studies. Different definitions of small and large classes lead to similar problems. Research on class size does not take other relevant variables into account. Smaller class size appears to contribute to quality educational processes, although many studies do not find this. Class size appears to have little or no influence on student achievement. Some studies favor smaller classes, some larger and others find no significant difference. Numbers of studies on each side of the above-mentioned controversies are not presented in this review.

RESEARCHER'S CONCLUSIONS:

Educators need to use common sense and experience and general trends presented by the research evidence.

REVIEWER'S NOTES AND COMMENTS:

This review is not as extensive as the ERS review published the same year.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 91 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Furno, O. F. and Collins, G. J. Class size and pupil learning. Baltimore, MO: Baltimore City Public Schools, 1967. (ERIC/EDRS No. ED 025 003)

DESCRIPTORS: Class Size

SHORT TITLE: Furno & Collins, 1967, Class Size & Learning

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a well-controlled correlational study.

SYNOPSIS:

Data were collected on 16,449 pupils who had attended third grade in the Baltimore Public Schools in 1959 and were still attending the Baltimore Public Schools in 1965. These were 6,568 regular white pupils, 8,341 regular non-white pupils, 441 special education white pupils and 1,099 special education non-white pupils. Pupils were divided into cells on the basis of parent's occupation, IQ scores, and class size over the four-year period starting in September 1959. Variables examined included: 1) number of different home addresses; 2) highest grade obtained; 3) total reading score; 4) total math score; 5) percentage of non-white faculty; 6) Baltimore Teachers Examination score; and 7) teacher's years of experience.

ITEM NUMBER: 91 SHORT TITLE: Furno & Collins, 1967
Class Size & Learning

RESEARCHER'S FINDINGS:

Regular students showed significantly more achievement if they were enrolled in small (1-25) classes in 61% of the comparisons made. There was no significant difference in 31% of the comparisons. Eight percent favored students in larger classes. Non-white students benefited slightly more than white students. Sixty-six percent favored smaller classes, 30% found no significant differences and only 3% favored larger classes. Even bigger differences in favor of smaller classes (1-19) were found for special education students. All overall differences were significant ($p < .001$). Students in large classes were found to have more supporting variables (teachers experience, less home moves) than students in small classes. This difference is not as large and no statistics are reported.

RESEARCHER'S CONCLUSIONS:

More research needs to be done using still more variables.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 92 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Wright, E. N., Shapson, S. M., Eason, G. and Fitzgerald, J. Effects of class size in the junior grades: A study. Toronto: Ontario Department of Education, 1977. (ERIC/EDRS No. ED 147 923)

DESCRIPTORS: Class Size

SHORT TITLE: Wright, et al., 1977, Class Size in Junior Grades

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The researchers should have done (or reported) pair-wise comparisons. Possible differences between classs of 16 and larger classes may have been overwhelmed by the lack of differences among the other three groups.

SYNOPSIS:

Teachers and grade 4 students from 11 schools in metropolitan Toronto were randomly assigned to 34 classes of 16, 23, 30 and 37 (class size could vary by two). In the second year, the same students and teachers were randomly assigned to grade 5 classes with the constraints that students should not be in classes of 16 or 37 both years, and that no teacher should have a class of the same size both years. Students were from all socio-economic categories, but the lower categories were over-represented in comparison to the Toronto school population. Teachers' expectations and attitudes were assessed by three annual questionnaires. The students' opinions of and attitudes toward their classes were assessed by attitude scales and a semantic differential measure. Parents' opinions were assessed by a single questionnaire. Student achievement was assessed by the Reading Comprehension, Vocabulary,

ITEM NUMBER: 92 SHORT TITLE: Wright, et al., 1977
Class Size

Mathematics-Problem Solving and Mathematics-Concepts scales of the Canadian Tests of Basic Skills and by specially designed measures of performance in Art and Composition. Students' academic self-concepts were assessed by the North York Self-Concept Inventory. Observations were made to assess teacher-pupil interaction, pupil participation, pupil satisfaction, method of instruction, subject emphasis, use of educational resources, phyiscal characteristics of the classroom and classroom atmosphere. The Indicators of Quality were also observed.

RESEARCHER'S FINDINGS:

Teachers had a positive attitude toward small classes at all three testing periods. Most teacher-pupil interaction variables did not differ in different class sizes, but the proportion of pupils addsressed as individuals was significantly higher at classes of 16 and classess of 23 than at all larger classes. All significant differences quoted are for $p < .05$ unlss otherwise noted. No measures of pupil participation were affected by class size. None of the reliable measures of method of instruction were significantly different. No consistent differences were found in the use of educational resources. Classroom atmosphere was not affected by class size. Indicators of Quality scores were not affected by class size. Students from a class of 16 had a more positive attitude toward school than those in other size classes ($p < .001$), but this may have been an artifact of the variablility due to year and teachers. There were no significant differences on any of the achievement scores except mathematics concepts ($p < .01$). Parents preferred smaller classes for their children.

RESEARCHER'S CONCLUSIONS:

More research is needed. Different grade levels should be studied. Other studies should be done which give the teachers training in how to better utilize opportunities of smaller classes.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 93 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Woodson, M. S. Effect of class size as measured by an achievement test criterion. IAR-Research Bulletin, 1968, 8(2). (ERIC/EDRS No. ED 021 320)

DESCRIPTORS: Class Size

SHORT TITLE: Woodson, 1958, Class Size & Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a correlational study, but it does control for some of the relevant variables. It would have been much stronger if it had used each student's class size rather than the district's average class size. Also, as the statistics are inadequately presented, the reader has to estimate significance from raw scores and sample sizes.

SYNOPSIS:

A survey of achievement test results in 95 school districts of the Metropolitan School Study Council, the Associated Public Scool Systems and the Central School Study. All districts used either the California, Metropolitan or Stanford Achievement Tests or the Iowa Test of Basic Skills. The arithmetic and reading and composite scores were used. Scores of fourth-sixth graders were converted to standard scores and correlated with IQ scores and average class size for the district.

ITEM NUMBER: 93 SHORT TITLE: Woodson, 1968
Class Size & Achievement

RESEARCHER'S FINDINGS:

There is a small inverse relationship between class size and academic achievement, but most of these differences are not significant (they don't test an overall correlation for significance--it probably would be). Low ability students were much more likely to show significant inverse relationship than middle or high ability students. Reading scores showed more significant negative correlations than arithmetic scores (which sometimes showed positive correlations). These negative correlations are more reliably found in fourth grade than in sixth grade.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 94 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Johnson, M. and Scriven, E. Class size and achievement gains in seventh- and eighth-grade English and mathematics. The School Review Quarterly, 1967, 75(3). (ERIC/EDRS No. ED 016 653)

DESCRIPTORS: Class Size

SHORT TITLE: Johnson & Scriven, 1967, Junior High Class Size

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a post hoc analysis of data already collected by Millman and Johnson (1964). No attempt could be made to control for any of the relevant variables known to affect achievement scores. This is a correlational study.

SYNOPSIS:

One hundred thirty English classes and 135 math classes were classified according to size and homogeneity. The reading comprehension and arithmetic test scores on the Iowa Test of Basic Skills were used to measure achievement. There were approximately 7,500 students in these classes.

ITEM NUMBER: 94 SHORT TITLE: Johnson & Scriven, 1967
Junior High Class Size

RESEARCHER'S FINDINGS:

No consistent differences were found.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 95 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Stennett, R. G. Class size: Confrontation or constructive compromise. Speech given before Ontario Educational Research Council Annual Conference, 1973. (ERIC/EDRS No. ED 087 099)

DESCRIPTORS: Class Size

SHORT TITLE: Stennett, 1973, Class Size Speech

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is not a research study.

SYNOPSIS:

ITEM NUMBER: 95 SHORT TITLE: Stennett, 1973
Class Size Speech

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 96 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Shapson, S. M. Optimum class size? A review of the liteature. Toronto Board of Education, Research Department, 1972, (ERIC/EDRS No. ED 070 757)

DESCRIPTORS: Class Size

SHORT TITLE: Shapson, 1972, Class Size Literature Review

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___ .

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Rather than being a true literature review, this paper draws conclusions and then gives one or two examples of supportive studies.

SYNOPSIS:

This paper reviews 20 studies on class size.

ITEM NUMBER: 96 SHORT TITLE: Shapson, 1972
Class Size Literature Review

RESEARCHER'S FINDINGS:

Two studies found that some teachers in small classes change their teaching behavior, but large numbers (about half) do not. Four studies found that teachers prefer smaller classes. Two studies found more behavior problems in large classes. Achievement studies are inconclusive because of poor definitions of class size. Reviews Olson's (1970) Indicators of Quality study which found critical class size cut-off points. Other variables are more important than class size.

RESEARCHER'S CONCLUSIONS:

There is not any optimal class size.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 97 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Sitkei, E. G. The effects of class size: A review of the research. Los Angeles: Los Angeles County Superintendent of Schools, Division of Research and Pupil Personnel Services. Research Study Series. Research Report No. 4, 1968. (ERIC/EDRS No. ED 043 124)

DESCRIPTORS: Class Size

SHORT TITLE: Sitkei, 1968, L.A. Class Size Review

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) [1] 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Sitkei reviews some older reviews and discusses case studies and opinion polls.

SYNOPSIS:

This paper reviews 23 class size studies.

ITEM NUMBER: 97 SHORT TITLE: Sitkei, 1968
L.A. Class Size Review

RESEARCHER'S FINDINGS:

Most reviews find that smaller classes are usually found to improve achievement, but methodological problems are overwhelming. Small classes are more likely to promote varied teaching strategies.

RESEARCHER'S CONCLUSIONS:

The skill of the teachers is more important than the size of the class.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 98 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Effects of class size on reading achievement in grades 1-3 in the Madison Metropolitan School District (1974-1976). Madison, WN: Instructional Services Division, Madison Metropolitan School District, Wisconsin, 1976. (ERIC/EDRS No. ED 140 256)

DESCRIPTORS: Class Size

SHORT TITLE: Madison Class Size Study, 1976

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) [1] 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Different size classs were in different areas. Also, special education students (almost all in small classes) were included. These two problems make the data meaningless.

SYNOPSIS:

Over 2,000 students were in this study, but methodological problems (missing data, etc.) cut the sample size to 517. These students were tested in grade 3 and their reading scores were compared to whether their class size was greater than or less than 23.5 (the median class size of the district).

ITEM NUMBER: 98 SHORT TITLE: Madison Class Size Study, 1976

RESEARCHER'S FINDINGS:

There were no significant differences attributable to class size. Students attending smaller classes all three years tended to have lower reading scores but this may be because some of them were special education students. The mean IQ scores for one small group was 10.5 lower than the mean IQ scores for a large group at another school.

RESEARCHER'S CONCLUSIONS:

Differences in achievement are probably due to intelligence level rather than class size.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 99 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Jeffs, G. A. and Cram, B. The influence of class size on academic attainment and student satisfaction. Las Vegas, NV: Edward W. Clark High School, 1968. (ERIC/EDRS No. ED 021 252)

DESCRIPTORS: Class Size

SHORT TITLE: Jeffs & Cram, 1968, Class Size/ Business and Government

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Criteria for determining class size are not consistent with common practice, i.e., the small class size used here is often used as the large size in other investigations.

SYNOPSIS:

The subjects were 224 students at Clark High School during the 1966-67 school year. The subjects were randomly assigned to a 24-27 person average size class or a 45-52 person large class in one of two businss courses or a government course. All four business classes had the same instruction and both government courses had the same instructor. Students were pretested on a test of mental maturity and a student attitude survey. Teachers wre given a teacher attitude inventory. Also, a teacher constructed test in the subject area of the class was given. The attitude tests and the teacher constructed test were re-administered following 17 weeks. The classrooms were the same for all equivalent classes.

ITEM NUMBER: 99 SHORT TITLE: Jeffs & Cram, 1968
Class Size/Business and Government

RESEARCHER'S FINDINGS:

There were no attitude differences between any group. The business courses showed no differences in achievement. The government course found greater achievement in the smaller class ($p < .05$).

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

None.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 100 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Moody, W. B., Bausell, R. B., and Jenkins, J. R. The effect of class size on the learning of mathematics: A parametric study. Paper presented at the Annual Meeting of the American Educational Research Association, 1972. (ERIC /EDRS No. ED 062 138)

DESCRIPTORS: Class Size

SHORT TITLE: Moody, et al., 1972, Class Size/Math

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

No control group; instructional methods may have influenced findings.

SYNOPSIS:

The subjects were 249 fourth grade students in three public schools in Northern Delaware. The teachers were 17 undergraduate junior and senior level elementary education majors who volunteered to participate. The study was conducted over a three-day period, and 14 of the teachers participated for only one day. Two teachers participated for two days in two schools. The last teacher participated in all three schools on different days. Within each school, Group 1-1 consisted of 20 students who received individual instruction. Group 1-2 consisted of 20 students who received lessons two at a time. Group 1-5 consisted of 20 students who received lessons five at a time. Group 1-23 consisted of a group of 23 students who all received the lesson together. Students were randomly assigned to groups, and within each school, teachers were randomly assigned to groups with the following constraints: no teacher was assigned to teach more than one group with five

or more students, all teachers were assigned to at least one 1-2 group, and all teachers were assigned to at least two 1-1 students. Instructional order was randomly assigned except for constraints caused by the availability of only one room big enough for groups of five or more. All subjects scored five or less on a pretest covering the ten topics to be covered in the lesson. All subjects received exactly 30 minutes of instruction. The test contained 20 questions, two on each topic.

RESEARCHER'S FINDINGS:

Students who received individual instruction had higher test scores than those who received instruction in groups of two or five. The scores of students who were instructed in twos or fives were approximately the same and were superior to those instructed in a group of 23.

RESEARCHER'S CONCLUSIONS:

"An empircal rationale is supplied for small group remedial instsruction in those cases in which additional personnel are available to supplement the instruction of the classroom teacher. Examination of the means of the four groups, however, clearly indicate that although small group instruction is incremental when compared to large group instruction, large group instruction is much more efficient in terms of total learning produced. For this reason it is tempting to suggest that personnel such as teacher aides might be efficaciously employed to instruct small groups of academically needy students at the same time that the regular classroom teacher instructs the remaining students."

REVIEWER'S NOTES AND COMMENTS:

A description of the study's method, findings and conclusion may be found in the Class Size backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 101 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: DeAngelis, J. Jr. The influence of class size on student performance in a secondary school science laboratory. Glenside, PN: Beaver College, 1977. (ERIC/EDRS No. ED 139 656)

DESCRIPTORS: Class Size

SHORT TITLE: DeAngelis, 1977, Class Size/Lab

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This study is well-controlled, but studies an extremely narrow area. The program itself provides individual instruction of sorts.

SYNOPSIS:

Ninth grade students who scored in 45-55 percentile range in the Scholastic Testing Service Achievement Tests were randomly assigned to a class of 23 or a class of 46. The experimenter taught both classes, using the same curriculum for the same six-month time period. This program contains lots of lab work where students pair off with their own equipment.

ITEM NUMBER: 101 SHORT TITLE: DeAngeles, 1977
Class Size/Lab

RESEARCHER'S FINDINGS:

No significant differences were found between classes although the smaller class did have a slightly higher mean achievement score.

RESEARCHER'S CONCLUSIONS:

These findings might not generalize to different subject matter, different grade levels, or more heterogeneous classes.

REVIEWER'S NOTES AND COMMENTS:

A copy of the bibliography is located in the Class Size backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 102 LOCATION: NWREL Info. Cntr. Microfiche

REVIEWER: P. Rapaport DATE REVIEWED: 12/80

CITATION: Gajewsky, S. Class size: Review of the literature and selected annotated bibliography. Reports in Education No. 2. McGill University, Montreal, 1973. (ERIC/EDRS No. ED 093 055)

DESCRIPTORS: Class Size

SHORT TITLE: Gajewsky, 1973, Class Size Review/Bibliography

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good but not extensive review.

SYNOPSIS:

This monograph reviews 54 studies on the effects of class size.

ITEM NUMBER: 102 SHORT TITLE: Gajewsky, 1973
Class Size Review/Bibliography

RESEARCHER'S FINDINGS:

All studies find that students and teachers prefer small classes. One study is reported showing achievement gains for large classes in English and two in math, all at the high school level. One study favors smaller classes in English. All three studies in languages favor classes less than nine to those larger. One study in math favors classes of 21 versus classes of 84. Two English studies show no significant differences. Two of three reading studies favor small classes, one reported no significant differences. Two studies favor small classes in sciences, one finds no significant differences. Both studies favor small classes in special education. No significant differences was found in a history study, nor in a geometry drawing study. Four of five studies in education classes found no differences, while the other favored large classes. No significant differences were found in three economics studies, three political science studies, two teacher health studies, four thinking skills studies and one study in each of the following: typing, sociology, creative drawing and accounting. Two of three studies favored small classes in physical education, the other found no significant differences. Both studies favored small kindergarten classes. All three studies favored small classes in human development. Two of six overall class size studies favored smaller classes. The other four reported no significant differences.

RESEARCHER'S CONCLUSIONS:

There is no overall answer to the question of class size. Class size is related to the method of the teacher and the subject taught and the type of student. Further research should be of good quality. None of the studies were done in Montreal so they don't mean much for Montreal.

REVIEWER'S NOTES AND COMMENTS:

A copy of the bibliography is located in the Class Size backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 112 LOCATION: NWREL, CBE Program

REVIEWER: K. Cotton DATE REVIEWED: 12/22/80

CITATION: Glass, G.V., and Smith, M.L. Meta-analysis of research on the relationship of class-size and achievement. San Francisco: Far West Laboratory for Educational Research and Development, September 1978.

DESCRIPTORS: Class Size

SHORT TITLE: Glass & Smith, 1978, Class Size/Achievement Meta-Analysis

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a solid and carefully conducted study.

SYNOPSIS:

This study re-examined previous research studies on the relationship between class size and student achievement to determine: 1) why this extensive body of research was contradictory and inconclusive, and 2) whether there is an actual relationship between class size and achievement.

The researchers collected 77 studies, many of which had been overlooked in previous reviews of the literature on the class size-achievement relationship. These studies yielded over 700 comparisons of the achievement of larger and smaller classes, and concerned nearly 900,000 students of various aptitudes, in various educational settings, and in various curricular areas. The 700 comparisons were integrated, using "complex methods of regression analysis," into a single curve showing the relationship between class size and achievement in general. Approximately 100 of the comparisons emerged from studies which had controlled adequately for initial differences among pupils and teachers in smaller and larger classes; these form the basis of the conclusions about the class size-achievement relationship.

ITEM NUMBER: 112 SHORT TITLE: Glass & Smith, 1978
Class Size Meta-Analysis

RESEARCHER'S FINDINGS:

The inconsistency/inconclusiveness of the research resulted from: 1) "haphazard" and "overly-selective" literature searches; 2) lack of quantitative methods and/or misuse of them.

The study found that, as class size increases, student achievement decreases. Very small achievement advantages were noted when small reductions were made in class size in the 20-30 pupil range and large advantages when class size was reduced below 20.

Pupil achievement was found to be higher in small classes--and highest in very small classes (under 20)--regardless of grade level, subject area or ability of pupils.

RESEARCHER'S CONCLUSIONS:

"A clear and strong relationship between class-size and achievement has emerged. The relationship seems slightly stronger at the secondary grades than the elementary grades; but it does not differ appreciably across different school subjects, levels of pupil IQ, or several other obvious demographic features of classrooms...it is safe to say that between class-sizes of 40 pupils and one pupil lie more than 30 percentile ranks of achievement...there is little doubt that, other things equal, more is learned in smaller classes."

REVIEWER'S NOTES AND COMMENTS:

References are included in the Class Size backup file. See also Item No. 113 and PDK, 1980, 62, 239-244.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 113 LOCATION: NWREL, CBE Program

REVIEWER: K. Cotton DATE REVIEWED: 12/22/80

CITATION: Smith, M.L., and Glass, G.V. Relationship of class-size to classroom processes, teacher satisfaction and pupil affect: A meta-analysis. San Francisco: Far West Laboratory for Educational Research and Development, July 1979.

DESCRIPTORS: Class Size

SHORT TITLE: Smith & Glass, 1979, 2nd Class Size Meta-Analysis

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This study is solid and well-designed.

SYNOPSIS:

This study followed from the same researchers' 1978 study which demonstrated a strong positive relationship between smaller classes and higher student academic achievement. In that study data from 77 previously conducted studies were re-examined and then synthesized to provide meaningful general conclusions about the class size/achievement relationship. (See Item No. 112)

In the second study, documents from the same literature search were used and the same procedures were used to quantify the outcomes generated in those documents. The regression analysis techniques used represented refinements of those applied in the first study. Sixty studies were examined.

ITEM NUMBER: 113 SHORT TITLE: Smith & Glass, 1979
2nd Class Size Meta-Analysis

RESEARCHER'S FINDINGS:

On all measures (classroom processes, pupil affect and teacher satisfaction), reduction in class size was associated with higher quality schooling and more positive attitudes. The effects were most notable for children 12 years and under and least apparent for pupils 18 and over.

"...the difference in the quality of the educational environment between a class size of one and a class size of 40 is 46 percentile ranks."

"The most dramatic effects were those relating to teachers; smaller but still substantial, were affective effects on pupils and effects on the instructional process."

RESEARCHER'S CONCLUSIONS:

"Class size affects the quality of the classroom environment. In a smaller class there are more opportunities to adapt learning programs to the needs of individuals...Class size affects pupils' attitudes, either as a function of of better performance or contributing to it...Class size affects teachers. In smaller classes their morale is better; they like their pupils better, have time to plan, diversify; are more satisfied with their performance."

REVIEWER'S NOTES AND COMMENTS:

References are included in the Class Size backup file. See also PDK, 1980, 62, 239-244.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 114 LOCATION: NWREL Info. Cntr. Periodicals

REVIEWER: K. Cotton DATE REVIEWED: 12/23/80

CITATION: Educational Research Service, Inc. Class size research: A critique of recent meta-analyses. Arlington, VA: ERS, 1980.

DESCRIPTORS: Class Size

SHORT TITLE: ERS, 1980, Class Size Research Critique

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a careful, well-done analysis.

SYNOPSIS:

This is a critique of two class size meta-analyses conducted by Smith and Glass (see Item Nos. 112 and 113). In those studies the researchers concluded that smaller classes have a positive effect on both the achievement and non-achievement aspects of pupil instruction. The ERS study re-examined the data used by Smith and Glass to determine whether these data in fact supported the conclusions and far-reaching policy implications presented by them.

ITEM NUMBER: 114 SHORT TITLE: ERS, 1980
Class Size Research Critique

RESEARCHER'S FINDINGS:

ERS' findings were presented in the form of five major points:

1. The (meta-analysis) method precludes identification of meaningful clues contained in class size research. ERS found the meta-analysis measurement techniques "too insensitive" to identify many of the important relationships pertaining to class size.

2. The Smith and Glass study relies of few studies, the methodology is inconsisently used and conclusions are overgeneralized. ERS takes issue with Smith and Glass' claim that their findings emerge from many studies. ERS reminds readers that these findings rest on "well controlled" studies, which are only a small percentage of the total examined. Other criticisms of methods are offered.

3. Interpretations of findings are often contradicatory. ERS' examination revealed various contradictions relating to class size and factors such as pupil age, subject taught, achievement in the mid-range, etc.

4. The study confuses the class size issue and presents conclusions/ recommendations unsupported by findings.

5. The study claims to have laid to rest the class size issue, when in fact, further research may be needed.

RESEARCHER'S CONCLUSIONS:

"Further research is needed that would focus on such specific groups of pupils and subject areas which have been tentatively identified as being positively affected by smaller classes."

"In the final anslysis, ERS finds that, despite claims to the contrary, the two meta-analyses fail to provide any new evidence relating to class size research that holds important implications for educational policy."

"It should be emphasized that the purpose of the critique has not been to make a case for either smaller or larger classes, but rather to analyze the findings and interpretations of (the Smith and Glass meta-analyses).

REVIEWER'S NOTES AND COMMENTS:

A summary of this report may be found in the Class Size backup file, along with a rebuttal from Glass and a response to the rebuttal from ERS (PDK, 1980, 62, 239-244).